

**REMARKS**

Claims 1-16 are pending in this application. By this Amendment, claims 1 and 13 are amended to recite features supported in the specification at, for example, page 6, line 12 – page 7, line 2 and Fig. 2. No new matter is added by any of these amendments.

Applicants gratefully acknowledge that the Office Action indicates that claims 11 and 12 are allowed, and that claims 4-7 and 16 contain allowable subject matter. However, Applicants assert that all of claims 1-3, 8-10 and 13-15 are also allowable for the reasons discussed below.

Reconsideration based on the following remarks is respectfully requested.

**I. The Specification Satisfies All Formal Requirements**

The Office Action requests Applicants' cooperation in reviewing the specification. Accordingly, the specification has been reviewed for errors without any having been identified.

**II. Claims 1-3, 8-10 and 13-15 Define Patentable Subject Matter**

The Office Action rejects claims 1-3, 8, 10, 13 and 14 under 35 U.S.C. §102(b) over U.S. Patent 5,790,731 to Deveau; and claims 9 and 15 under 35 U.S.C. §103(a) over Deveau. These rejections are respectfully traversed.

Deveau does not teach or suggest an optical wiring board comprising a support board; and an optical component including an optical waveguide, which has a plate shape and has at least two end faces; and an optical fiber connected to at least one of the end faces of the optical waveguide optically, wherein: the optical component is placed on the support board; and a top surface of the optical waveguide and the optical fiber is sealed by resin, as recited in claim 1. This applies by extension to claims 2, 3, 8 and 10 based on their dependence from claim 1.

Also, Deveau fails to teach or suggest a method for manufacturing an optical wiring board including: a support board; and an optical component having an optical waveguide, which has a plate shape and has at least two end faces; and an optical fiber connected to at least one of the end faces of the optical waveguide optically, wherein the optical component is placed on the support board, the method comprising: temporarily securing the optical component on the support board; and simultaneously sealing the optical waveguide and the optical fiber to the support board by resin, as recited in claim 13. This applies by extension to claim 14 based on its dependence from claim 13.

Instead, Deveau discloses an interconnection assembly for optical integrated circuits (OICs). In particular, Deveau teaches a silicon substrate 1 forming OICs 3 with optical waveguides 4 in an OIC integration area 2. The substrate 1 connects to an optical fiber array 10 with first and second parts 12, 13 to support optical fibers 11 between alignment grooves 14 (col. 6, lines 30-38, col. 8, lines 25-35, col. 14, lines 21-37 and Figs. 1, 5B and 14 of Deveau).

Also, Deveau teaches that a protective plate 7 protects the OICs 3 and their respective optical waveguides 4 (col. 6, lines 39-48 of Deveau). Ends 4a of the optical waveguides 4 are fixed relative to ends 11a of optical fibers 11 by an adhesive 20 (col. 12, lines 7-50 of Deveau). Thus, Deveau teaches that the side surfaces of the optical waveguides 5 are sealed by the adhesive 20. In contrast, Applicants' claims 1 and 13 recite that "a top surface of the optical waveguide and the optical fiber is sealed by resin", which is patentably distinguishable from Deveau.

Moreover, claim 13 recites "simultaneously sealing and fixing the optical waveguide and the optical fiber to the support board by resin." In contrast, Deveau teaches a manufacturing process that fixes the optical fibers 11 to the fiber array 10, and then connecting the optical waveguide 4 in an OIC assembly 19 to the fiber array 10 by the

adhesive 20. Thus, the simultaneous sealing and fixing process in Applicants' claim clearly differs from the sequential connecting operations of Deveau.

A claim must be literally disclosed for a proper rejection under §102. This requirement is satisfied "only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference" (MPEP §2131). Applicants assert that the Office Action fails to satisfy this requirement with Deveau.

Further, regarding claims 9 and 15, the Office Action has not established a proper motivation for a *prima facie* case of obviousness. Even assuming that motivation to modify the applied reference is established, the result fails to teach or suggest Applicants' claimed features.

A *prima facie* case of obviousness for a §103 rejection requires satisfaction of three basic criteria: there must be some suggestion or motivation either in the references or knowledge generally available to modify the references or combine reference teachings, a reasonable expectation of success, and the references must teach or suggest all the claim limitations (MPEP §706.02(j)). Applicants assert that the Office Action fails to satisfy these requirements with Deveau.

For at least these reasons, Applicants respectfully assert that the independent claims are patentable over the applied reference. The dependent claims are likewise patentable over the applied reference for at least the reasons discussed, as well as for the additional features they recite. Consequently, all the claims are in condition for allowance. Thus, Applicants respectfully request that the rejections under 35 U.S.C. §§102 and 103 be withdrawn.

### **III. Conclusion**

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,



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